

고추(*Capsicum annuum* L.) 잎으로부터 Phenolic compounds의 분리

경희대학교 : 이재웅¹, 조진경², 이대영², 박지혜², 이민경², 노영덕³, 이윤형¹, 백남인^{2*}

Phenolic compounds from the Leaves of *Capsicum annuum* L. (Hot Pepper)

¹Department of Horticultural Biotechnology, Kyung Hee University, Yongin 446-701, ²Graduate School of Biotechnology & Plant Metabolism Research Center, Kyung Hee University, Yongin 446-701, ³Graduate School of Oriental Medicinal Materials & Processing, Kyung Hee University, Yongin 446-701

Jae-Woong Lee¹, Jin-Gyeong Cho², Dae-Young Lee², Ji-Hae Park¹, Min-Kyung Lee¹, Yeong-Deok Rho³, Youn-Hyung Lee¹, Nam-In Baek^{2*}

Objectives

Capsicum annuum is a very important plant used worldwide as vegetables, spices and external medicine. A number of studies have been carried out on *C. annuum* fruit, but there are only a few studies on leaves. *C. annuum* leaves are familiar to Korean as a seasoned vegetable in spring and summer season. Though *C. annuum* leaves were reported to have an inhibitory effect on anti-complementary activity, anti-mutagenic activity, anti-microbial activity, DPPH scavenging activity and anti-tyrosinase activity, phytochemical investigation has not been reported so far. In this study, the authors reported the isolation and identification of phenolic compounds from the leaves of *C. annuum*.

Materials and Methods

¹H-NMR (400 MHz) and ¹³C-NMR (100 MHz) spectra were recorded on a Varian Unity Inova AS-400 FT-NMR spectrometer.

The leaves of *C. annuum* were extracted with 80% aqueous MeOH and the concentrated extract was partitioned with EtOAc, *n*-BuOH and H₂O, successively.

Results

From the EtOAc fraction, three phenolic compounds were isolated through the repeated silica gel and ODS column chromatography. The chemical structures of the compounds were determined as tortoside C, apigenin and apigenin 7-O-glucoside on the basis of physic-chemical and spectroscopic data including NMR, MS and IR.